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Akio Suto

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EXAMINER

LEROUX, ETIENNE PIERRE

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2161

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/819,612	SUTO, AKIO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Etienne P. LeRoux	2161	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2008.  
 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 16-23 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-12 and 16-23 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
     1. ☐ Certified copies of the priority documents have been received.  
     2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)<br>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)<br>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/29/2001</u> . | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____.<br>5) <input type="checkbox"/> Notice of Informal Patent Application<br>6) <input type="checkbox"/> Other: _____. |
|---|--|

***Claim Status***

Claims 1-12 and 16-23 are pending.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 7, 8 and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Satagopan et al (US 6,751,674).

Regarding claim 1, 7, 16, 17, Satagopan discloses a distributed data processing system [Fig 2, col 6, lines 15-35] comprising a plurality of servers and a plurality of clients connected to the servers for performing a distributed data processing process on an object to be controlled, each of said servers comprising:

a database memory for storing a database which is updated by the distributed data processing process performed by said clients which alters data [Fig 2, domain storage 74, col 6, lines 15-35],

a replication trigger generator for generating a replication trigger based on a change of data in said database caused by the distributed data processing process performed by said clients

connected to one of the servers [Fig 2, replication from MMBS 72 to MMBS 76 based on change(s) by client #1, col 6, lines 15-35, col 2, line 65 through col 3, line 5]

an updating information transfer unit for transferring data updating information of said database to another one of the servers based on said replication trigger [Fig 2, replication from MMBS 72 to MMBS 76, col 6, lines 15-35,]

a database updating processor for directly updating data in said database based on the data updating information transferred from the other server [Fig 2, replication from MMBS 76 to MMBS 72, col 6, lines 30-35]

Regarding claim 2, 8, Satagopan discloses wherein each of said clients comprises: a connection information manager for managing connection information of a connection destination server to which the clients are connected; and a connection information changer for changing the connection information of the connection destination server; the arrangement being such that if any of said servers suffers a fault, said connection information is changed by said connection information changer, and the distributed data processing process performed by the clients connected to the server which suffers the fault is continued under the management of another normal one of the servers to which said connection information is changed [col 2, line 65 through col 3, line 5].

Regarding claim 18, Satagopan discloses wherein said database updating processor determines whether the data updating information is generated by said server or is transferred from the other one of said servers, and wherein when it is determined that the data updating information is transferred from the other one of said servers, a replication trigger generation inhibition is issued to said replication trigger generator Col 6, lines 30-35]

Regarding claim 19, Sat6agopan discloses wherein the updating of the database occurs prior to the generating of the replication trigger [col 6, lines 25-35] .

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satagopan as applied to claim 1 above, and further in view of Taylor (6,658,589).

Regarding claim 3, Satagopan discloses the elements of the claimed invention as noted above but does not disclose a backup processor for performing backup process at predetermined time intervals while said database is in operation; a backup data memory for storing backup data produced by the backup process performed while said database is in operation; and an archive data memory for storing updating information of said database as archive data; wherein at least part of said database is recovered using said archive data; wherein said database is recovered using said backup data and said archive data. Taylor discloses a backup processor for performing backup process at predetermined time intervals while said database is in operation; a backup data memory for storing backup data produced by the backup process performed while said database is in operation; and an archive data memory for storing updating information of said database as archive data; wherein at least part of said database is recovered using said archive data; wherein said database is recovered using said backup data and said

archive data [Fig 4]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Satagopan to include a backup processor for performing backup process at predetermined time intervals while said database is in operation; a backup data memory for storing backup data produced by the backup process performed while said database is in operation; and an archive data memory for storing updating information of said database as archive data; wherein at least part of said database is recovered using said archive data; wherein said database is recovered using said backup data and said archive data as taught by Taylor for the purpose of creating a backup system [Taylor, col 5, lines 10-25]

Regarding claim 4, the combination of Satagopan and Taylor discloses a backup processor for performing backup process at predetermined time intervals while said database is in operation; a backup data memory for storing backup data produced by the backup process performed while said database is in operation; and an archive data memory for storing updating information of said database as archive data; wherein at least part of said database is recovered using said archive data; wherein said database is recovered using said backup data and said archive data [Satagopan, col 6, lines 25-35]

Regarding claim 9, the combination of Satagopan and Taylor discloses the step of activating again said server suffering the fault to resume normal operation after completion of a restoring process, said step of activating again said server comprising the steps of: shutting off all the clients connected to said server; setting again information of the connection destination of the clients; connecting the clients to said server according to the set information; and resuming the distributed data processing process in a normal connection state [Taylor, col 1, lines 35-50] .

Regarding claim 11, Satagopan discloses copying said backup data while the clients are being

continuously operated by said other normal server [col 6, lines 15-35]

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satagopan as applied to claim 1 above, and further in view of Nakamura et al (US 5,347,463).

Regarding claim 5, Satagopan discloses the elements of the claimed invention as noted above but does not disclose a server for managing one of the clients which is of a production management system which is of the object to be controlled; and a server for managing one of the clients which is of a process control system which is of the object to be controlled. Nakamura discloses a server for managing one of the clients which is of a production management system which is of the object to be controlled; and a server for managing one of the clients which is of a process control system which is of the object to be controlled [Fig 2(A), 65, col 6, lines 22-26]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Satagopan to include a server for managing one of the clients which is of a production management system which is of the object to be controlled; and a server for managing one of the clients which is of a process control system which is of the object to be controlled as taught by Nakamura for the purpose of providing a source of identical data for use in the event of failure of the primary source of data [col 6, lines 22-26].

Regarding claim 6, the combination of Satagopan and Taylor discloses wherein each of said servers has independent settings of distributed data processing so that said database can be independently processed in inserting, updating, or deleting data [Fig 2, col 6, lines 15-45]

Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satagopan as applied to claim 8 above, and further in view of Iseyama et al (US 6,223,038). Regarding claim 10, 12, Satagopan discloses the elements of the claimed invention as noted above but does not disclose performing a backup process at predetermined time intervals while said database is in operation and saving backup data produced by the backup process performed; generating and saving archive data based on the updating information of the database which is generated after the backup process performed while said database is in operation has started; and if one of said servers suffers a fault, copying said backup data of another normal one of the servers, and recovering the database from said archive data of the other normal server. Iseyama discloses performing a backup process at predetermined time intervals while said database is in operation and saving backup data produced by the backup process performed; generating and saving archive data based on the updating information of the database which is generated after the backup process performed while said database is in operation has started; and if one of said servers suffers a fault, copying said backup data of another normal one of the servers, and recovering the database from said archive data of the other normal server [col 3, lines 1-5]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Satagopan to include performing a backup process at predetermined time intervals while said database is in operation and saving backup data produced by the backup process performed; generating and saving archive data based on the updating information of the database which is generated after the backup process performed while said database is in operation has started; and if one of said servers suffers a fault, copying said backup data of another normal one of the



servers, and recovering the database from said archive data of the other normal server as taught by Iseyama for the purpose of ensuring consistency of data in the distributed database system.

Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satagopan as applied to claim 1 above, and further in view of Waters (US 6,564,216).

Regarding claim 20, 22, Satagopan discloses the elements of the claimed invention as noted above but does not disclose wherein the database updating processor polls for data updating information sent by another of the servers and wherein when the poll for updating information is successful, said database updating processor determines a presence of data changes in said updating information, and updates said database according to the data changes, and in response to the update, said replication trigger generator generates said replication trigger signal for transfer to a second one of the servers. Waters discloses wherein the database updating processor polls for data updating information sent by another of the servers and wherein when the poll for updating information is successful, said database updating processor determines a presence of data changes in said updating information, and updates said database according to the data changes, and in response to the update, said replication trigger generator generates said replication trigger signal for transfer to a second one of the servers [claim 5]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Satagopan to include wherein the database updating processor polls for data updating information sent by another of the servers and wherein when the poll for updating information is successful, said database updating processor determines a presence of data changes in said updating information, and updates said database according to the data changes, and in response

to the update, said replication trigger generator generates said replication trigger signal for transfer to a second one of the servers as taught by Waters for the purpose of checking for updates which the client may have made to the database.

Regarding claim 21, 23, the combination of Satagopan and Waters discloses when the database updating processor does not determine the presence of data changes in said updating information, said replication trigger generator is inhibited from generating said replication trigger signal [Waters, claim 5].

### ***Response to Arguments***

Applicant's arguments filed 9/22/2008 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne P. LeRoux whose telephone number is (571) 272-4022. The examiner can normally be reached on Monday through Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on (571) 272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Etienne P LeRoux/  
Primary Examiner, Art Unit 2161

1/27/2009